

CHALLENGES OF COLLECTION DEVELOPMENT IN UNIVERSITY LIBRARIES OF TAMIL NADU IN THE ELECTRONIC ENVIRONMENT

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ABSTRACT

Collection management is a more demanding concept, which goes beyond a policy of acquiring materials, to policies on housing, preservation, storage, weeding, and discards of stock. Electronic resource, any product that delivers a collection of data, be it in text, numerical, graphical, or time based, as commercially available resource and a kind of documents in digital formats, that are made available to library users through a computer based information retrieval system. The collection development, specifically university libraries has challenges. In this study, twenty four variables were identified as challenges in the collection development. Out of 520 questionnaires distributed among the LIS professionals working in University Libraries, 373 responded and the response rate works out to 71.73%. These 373 LIS professionals working University libraries of Tamil Nadu expressed their views on these 24 variables. The study does not reveal the synchronized opinion on different type of universities on these challenges. Factor analysis has been employed to reduce the 24 variables in groups. The cluster analysis has also been employed to identify the clustered group of variables. The challenges can be categorized as Management, Policies, Procurement, Collection Development, User, Preservation and IT related challenges.

KEYWORDS: Collection Development, Electronic, Environment, University Libraries, Challenges & Digital Environment

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INTRODUCTION

Electronic resource is a very broad term, which means any product that delivers a collection of data, be it in text, numerical, graphical, or time based, as commercially available resource and a kind of documents in digital formats which are made available to library users through a computer based information retrieval system. The Internet, the right and most extensively used channel to catch hold of the majority of e-resources through different search engines such as Google, Excite, MSN, Yahoo, Ask etc. Few offline databases in CD/DVD formats that can even be accessed without the help of internet are also found place in the libraries.

In recent years, academic users have become more dependent to obtain information pertinent to their research needs. Access to e-resources not only influences the way students and scholars conduct research, it also changes the way they use the traditional library. Especially, online e-journals have become widely popular among library users.

ELECTRONIC ENVIRONMENT

The Electronic Environment is the conglomeration of all of those events, facts, realities into a tangible experience of a changed way of being. A culture shift has happened where a technological leap forward has matched with or been contemporaneous with sympathetic philosophical and pedagogical advances. This electronic environment has also known as Digital environment. Digital Environment happens not only because the technology can make it happen, but also because the collaborative working strategies have also become main stream and because post modernity has fractured public confidence of alternative forms of knowledge. Of course, the synergistic relationship between all aspects of this culture shift is complex with different aspects feeding other developments promoting rapid, greenhouse, and development.

ELECTRONIC COLLECTION

Libraries of all sizes and types are embracing digital collections, although most libraries will continue to offer both print and digital collections for many years to come. New purchases and purchases of journals, magazines, and abstracting and indexing services are heavily weighted toward digital, while digital books (e-books) are only beginning to become a presence in library collections.

Libraries prefer digital collections for many reasons, including, but not limited to, the following: digital journals can be linked from and to indexing and abstracting databases; access can be from the user's home, office, or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and digital collections, save space and are relatively easy to maintain. When total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs.

NEED FOR THE STUDY

Many of the challenges libraries face today are the same ones that libraries have always faced, but in a new form. Although no library has had sufficient funds to purchase everything it wanted, today's particularly slim budgets mean that librarians must focus on the main principle of basing collection decisions on patron needs. Librarians, knowing they must justify their spending and, in some cases, even the existence of their libraries, have become more judicious about how funds are spent, looking closely at what is being requested and what is used.³ They make professional decisions about purchasing materials, decisions that are based on several factors, including resource reviews, developments in various subject fields, statistics that include usage and age of a collection, how the current collections might be lacking, and patrons' need. In this study an attempt has been made to identify the challenges in the collection development in University libraries of Tamil Nadu.

REVIEW OF RELATED LITERATURE

Collection management is a more demanding concept, which goes beyond a policy of acquiring materials, to policies on housing, preservation, storage, weeding, and discards of stock. It emphasized on systematic management of the library's existing collection. (Seetharama, 1997). The changing phase of collection management, emphasized the need for the cooperative collection development program, that are apt to the current library circumstances specific electronic environment (Wajiti A Alvi, 1997) Collection development is a universal, dynamic and continuous activity. It involves the users, the library staff and subject experts. Collection management is implied as one of the managerial functions in the administration of the library management. Despite a wide variety of institutional environments and management styles,

Collection development would be more fruitful in fulfilling their responsibility by taking the support from their central administration. (Robert Kenseler, 1996). Philip Hunter & Micheal Day (2005) attempted to identify some of the main issues of collection development that need to be considered when institutional repositories and aggregator services are established. Two practical suggestions are that collection development policies should clearly state information on access, intellectual property rights, intended scope of the quality of the collection and that these repositories should develop secondary metadata generation tools that facilitate the production of consistent metadata.

OBJECTIVES

The objectives of the study are,

- To identify the constraints in collection development in an electronic environment.
- To identify the budgetary constrain in collection development
- To identify the predominant constraint irrespective of the domain of the university

HYPOTHESES

Based on the objectives, the following hypotheses were formulated.

- There exist constraints in collection development in an electronic environment.
- The challenges were identical irrespective of type of university.
- There exists a clear vision on constraints in collection development among LIS Professionals.

METHODOLOGY

The questionnaire was administrated among the LIS professionals working in 22 State Universities, 28 Deemed Universities and 2 Central Universities in Tamil Nadu. A total of 520 questionnaires were distributed. Out of which 373 were responded and response rate is 71.73%.

Table 1: Distribution of Questionnaire

S. No.	Type of University	No. of Universities	Questionnaire Distributed	Responses Received	Percentage	Cumulative Percentage
1	State University	22	220	158	42.4	41.5
2	Deemed University	28	280	199	53.4	95.6
3	Central university	2	20	16	4.3	100.0
	Total	52	520	373	100.0	

LIMITATIONS

Some of the limitations are

- The libraries that exist 52 Universities in Tamil Nadu alone taken up for the study.
- The constitutional institutions were not taken up for the study.
- The LIS Professionals working in universities alone taken up for the study.
- Each institution, only 10 questionnaires alone distributed.

DATA ANALYSIS**Demographic Details**

The demographic details of the respondents of campus wise were shown in Table 2.

Table 2: Demographic Details

S. No.	Description	Respondents	
Type of University			
1	State University	158	42.4
2	Deemed University	199	53.4
3	Central University	16	4.3
Domain			
1	Arts	127	34.0
2	Engineering	71	19.0
3	Medical	45	12.1
4	Multi	74	19.8
5	Others	56	15.0
Status			
1	Superior	37	9.9
2	Subordinate	336	90.1
Gender			
1	Male	245	65.7
2	Female	128	34.3
Age			
1	Below 30 years	29	7.8
2	Between 31 and 40 years	46	12.3
3	Between 41and 50 years	285	76.4
4	Above 50 years	13	3.5
Designation			
1	Librarian	38	10.2
2	Asst. Librarian	305	81.8
3	Others	30	8.0
Experience			
1	Below 5 years	46	12.3
2	Between 6 and 10 years	81	21.7
3	Between 11and 15 years	101	27.1
4	Between 16 and 20 years	106	28.4
5	Above 20 years	39	10.5
Qualification			
1	BLIS	13	3.5
2	MLIS	129	34.6
3	M.Phil.,	119	31.9
4	Ph.D.,	112	30.0
Overall			
Total		373	100.0

Table 2 reveals that among 373 respondents, 199 (53.4%) belongs to deemed universities followed by State universities 158 (42.4%) and Central University 16 (4.3%). The majority of the respondents 127 (34%) is from Arts domain. 90.1% of the respondents are on the status of subordinates and 245 (65.7%) are male. The age of the respondents was grouped and 76.4% of the respondents are in the age group of 41-50. Almost 82% are working as Asst. Librarian and 78% of the respondents having experience between 6 and 20 years. 96% of the respondents have a PG qualification. Out of 373 respondents, 112 (30%) are having PhD qualification.

Reliability Analysis

To ensure that the research produces reliable findings and results, a reliable tool would need to be employed. Moreover, the exploratory nature of this study necessitated the need to conduct some form of test to check whether items used in the measures are tapping into the same construct (variables) or not. Such test was accomplished through the use of factor analysis. According to Coakes and Steed (2003), factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. Two widely used methods in factor analysis are Principal Components and Principal Axis Factoring. However, this study adopted the former and applied it to all variables that employed multi-items measures.

Reliability is concerned with the consistency of a variable. There are two identifiable aspects of this issue: external and internal reliability. Nowadays, the most common method of estimating internal reliability is Cronbachs alpha

$$(\alpha). \text{ The formula used is } \alpha = \frac{K}{K-1} \left(1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Commonly accepted rules for describing internal consistency using Cronbachs alpha (Cronbach, Lee and Shavelson, 2004) is $\alpha \geq 0.9$ (Excellent), $0.9 > \alpha \geq 0.8$ (Good), $0.8 > \alpha \geq 0.7$ (Acceptable), $0.7 > \alpha \geq 0.6$ (Questionable), $0.6 > \alpha \geq 0.5$ (Poor) and $0.5 > \alpha$ (Unacceptable). Table 3 enumerates the reliability analysis taken for the study and the alpha value is 0.7714.

Table 3: Reliability Analysis

RELIABILITY ANALYSIS - SCALE (ALPHA)					
Reliability Coefficients					
N of Cases	= 373.0	N of Items =	24	Alpha =.	.7714

The reliability test using Cronbachs alpha (α) indicates that all the 24 variables taken up for the study were good and the value 0.7714.

Opinion on Challenges in Collection Development

The opinion on the challenges in collection development of the respondents was ascertained based on twenty four variables in a five point scale, such as 'strongly agree', 'disagree', 'no opinion', 'agree' and 'strongly agree'. The opinions were shown in table 4 and the ranks were ascertained based on mean and standard deviation values.

Table 4: Challenges in Collection Development

S. No.	Description	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree	Mean	Std	Rank
1	Budget Issues / Financial Constraints	40 (10.7)	28 (7.5)	166 (44.5)	122 (32.7)	17 (4.6)	3.13	1.000	21
2	Legal issues - Copyright / IPR	35 (9.4)	44 (11.8)	104 (27.9)	166 (44.5)	24 (6.4)	3.27	1.062	16
3	Access (Licensing) of e-resources	33 (8.8)	35 (9.4)	98 (26.3)	164 (44.0)	43 (11.5)	3.40	1.092	11
4	Vendor support	28 (7.5)	44 (11.8)	107 (28.7)	176 (47.2)	18 (4.8)	3.30	.998	15
5	Supply on demand	14 (3.8)	38 (10.2)	203 (54.4)	108 (29.0)	10 (2.7)	3.17	.789	20
6	Technological obsolescence	40 (10.7)	49 (13.1)	106 (28.4)	178 (47.7)	0 (0.0)	3.13	1.011	22
7	Human resources (IT Skilled Manpower)	23 (6.2)	34 (9.1)	109 (29.2)	196 (52.5)	11 (2.9)	3.37	.920	13
8	Archiving of e-resources	28 (7.5)	44 (11.8)	117 (31.4)	174 (46.6)	10 (2.7)	3.25	.965	17
9	Arbitrary price structure / pricing models	35 (9.4)	42 (11.3)	114 (30.6)	174 (46.6)	8 (2.1)	3.21	1.000	19
10	Interoperability Issues	28 (7.5)	45 (12.1)	70 (18.8)	176 (47.2)	54 (14.5)	3.49	1.111	7
11	Preservation	28 (7.5)	28 (7.5)	118 (31.6)	87 (23.3)	112 (30.0)	3.61	1.201	5
12	IT infrastructure to access e-resources	38 (10.2)	34 (9.1)	73 (19.6)	188 (50.4)	40 (10.7)	3.42	1.121	10
13	Selection issues / Acquisition procedures	12 (3.2)	10 (2.7)	18 (4.8)	299 (80.2)	34 (9.1)	3.89	.725	1

Table 4: Contd.,									
14	Formats	17 (4.6)	13 (3.5)	56 (15.0)	251 (67.3)	36 (9.7)	3.74	.855	4
15	Security	16(4.3)	13 (3.5)	62 (16.6)	217 (58.2)	65 (17.4)	3.81	.912	3
16	User training / orientation to use e-resources	12 (3.2)	10 (2.7)	60 (16.1)	226 (60.6)	65 (17.4)	3.86	.846	2
17	Weeding policy	17 (4.6)	23 (6.2)	141 (37.8)	164 (44.0)	28 (7.5)	3.44	.892	8
18	Resource Sharing and Consortia	12 (3.2)	21 (5.6)	148 (39.7)	158 (42.4)	34 (9.1)	3.49	.860	6
19	Storage Problems	12 (3.2)	54 (14.5)	107 (28.7)	164 (44.0)	36 (9.7)	3.42	.960	9
20	Collection Development Policy	17 (4.6)	133 (35.7)	90 (24.1)	107 (28.7)	26 (7.0)	2.98	1.052	24
21	Stock Verification	11 (2.9)	73 (19.6)	135 (36.2)	121 (32.4)	33 (8.8)	3.25	.966	18
22	Collection Evaluation	72 (19.3)	31 (8.3)	132 (35.4)	55 (14.7)	83 (22.3)	3.12	1.372	23
23	User - Centered Challenges	22 (5.9)	17 (4.6)	153 (41.0)	155 (41.6)	26 (7.0)	3.39	.908	12
24	Digitization Issues	20 (5.4)	36 (9.7)	158 (42.4)	124 (33.2)	35 (9.4)	3.32	.960	14

It is seen from Table 4 that, the first preference was given to 'Selection issues / Acquisition procedures' followed by 'User training / orientation to use e-resources' and 'Secure'. The least preferences were given to 'Collection Development Policy' and 'Collection Evaluation'. The mean value ranges between 2.98 and 3.89 which indicate that the variables lie between 'agree' and 'strongly agree'. The standard deviation ranges between 0.725 and 1.372 in a five point scale which shows that there is no much deviation in the opinion of the respondents.

Further, the study was extended to the type of university. The mean and standard deviation values were calculated and the same is shown in table 5.

Table 5: Challenges in Collection Development Vs Type of University

S. No.	Description	State University		Deemed University		Central University		Total	
		Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.
1	Budget Issues / Financial Constraints	3.01	1.056	3.17	.954	3.81	.655	3.13	1.000
2	Legal issues - Copyright / IPR	3.24	1.031	3.23	1.094	4.06	.574	3.27	1.062
3	Access (Licensing) of e-resources	3.23	1.156	3.48	1.039	4.06	.680	3.40	1.092
4	Vendor support	3.43	.919	3.14	1.049	4.00	.516	3.30	.998
5	Supply on demand	3.16	.794	3.15	.790	3.44	.727	3.17	.789
6	Technological obsolescence	3.10	1.042	3.11	1.007	3.75	.447	3.13	1.011
7	Human resources (IT Skilled Manpower)	3.15	1.023	3.51	.809	3.75	.683	3.37	.920
8	Archiving of e-resources	3.34	.908	3.15	1.017	3.69	.602	3.25	.965
9	Arbitrary price structure / pricing models	3.44	.856	2.97	1.075	3.81	.403	3.21	1.000
10	Interoperability Issues	3.66	1.007	3.31	1.182	4.00	.730	3.49	1.111
11	Preservation	3.78	1.114	3.43	1.265	4.13	.806	3.61	1.201
12	IT infrastructure to access e-resources	3.58	1.060	3.35	1.122	2.81	1.424	3.42	1.121
13	Selection issues / Acquisition procedures	3.91	.699	3.86	.766	4.13	.342	3.89	.725
14	Formats	3.71	.912	3.77	.796	3.69	1.014	3.74	.855
15	Security	3.90	.823	3.82	.884	2.75	1.390	3.81	.912
16	User training / orientation to use e-resources	3.92	.778	3.81	.871	3.88	1.147	3.86	.846
17	Weeding policy	3.53	.887	3.43	.831	2.69	1.302	3.44	.892
18	Resource Sharing and Consortia	3.47	.865	3.46	.863	4.00	.632	3.49	.860
19	Storage Problems	3.47	.969	3.39	.968	3.31	.793	3.42	.960
20	Collection Development Policy	3.03	1.025	2.98	1.052	2.38	1.204	2.98	1.052
21	Stock Verification	3.30	.920	3.18	1.012	3.63	.719	3.25	.966
22	Collection Evaluation	3.10	1.424	3.13	1.367	3.31	.873	3.12	1.372
23	User - Centered Challenges	3.59	.640	3.21	1.062	3.69	.602	3.39	.908
24	Digitization Issues	3.47	.763	3.16	1.073	3.81	.834	3.32	.960

It can be seen from table 5 that, the mean value in respect of state universities is between 3.01 and 3.92 and the standard deviation value is from 1.424 and. 699. The respondents were given more importance to 'User training / orientation to use e-resources' followed by 'Selection issues / Acquisition procedures' and 'security'. The least preference is 'Budget Issues / Financial Constraints', whereas the mean value in Deemed university is between 2.97 and 3.86. 'Selection issues / Acquisition procedures' are the main challenge in deemed university as well as in Central University. This table also reveals that the orders of challenges irrespective of the universities are interchanged among the top 3 challenges. The overall mean value is between 2.98 and 3.89.

Hierarchical Cluster Analysis

Further to the Pearson correlation, the factors assigned for strategies and fashion retail skills were tested through hierarchical cluster analysis using average linkage is shown in figure 1.

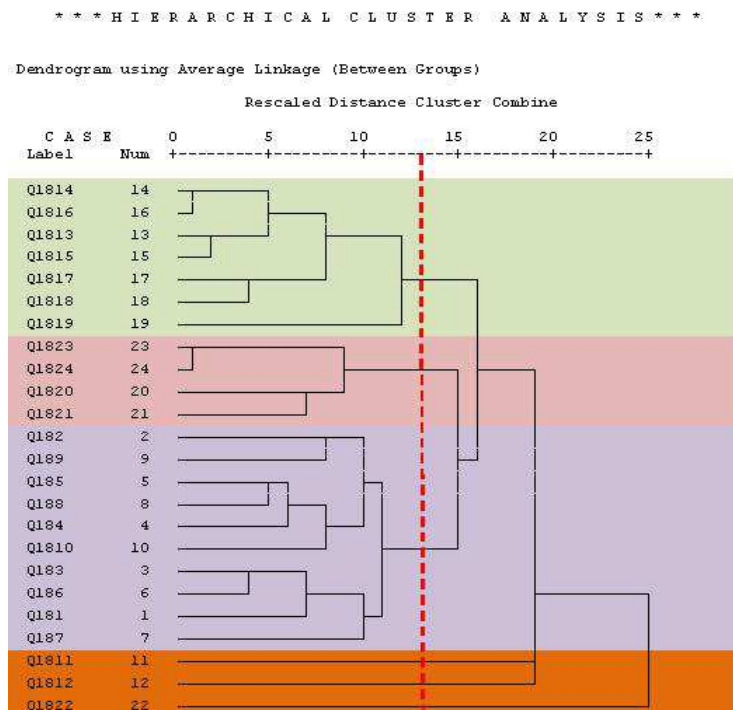


Figure 1: Hierarchical Cluster Analysis

It is seen from figure 1 that, there exist seven clusters at 50% level. Cluster one of four has each five variables, whereas the fifth cluster has two and the sixth and seventh has one variable each. Cluster one is named as 'Managing', two as 'Policies', three as 'Procurement', for as 'Collection development', five as 'User', six as 'Preservation' and seventh as 'IT'. Further confirming the cluster analysis, the proximity analysis was carried out to find the proximity between two variables and the same is shown in table 6.

Table 6: Proximity Analysis for Challenges in Collection Development

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Budget Issues / Financial Constraints	0																							
Legal issues - Copyright / Access of e-resources	508	0																						
Vendor support	449	421	0																					
Supply on demand	612	536	623	0																				
Technological obsolescence	520	514	589	382	0																			
Human resources (IT Skilled Manpower)	403	509	356	483	457	0																		
Archiving of e-resources	536	524	505	504	442	543	0																	
Arbitrary price structure / pricing models	616	610	673	442	382	497	690	0																
Interoperability Issues	660	460	613	446	514	531	532	500	0															
Preservation	733	569	558	461	533	512	707	431	529	0														
IT Infrastructure to access e-resources	757	717	724	811	745	784	803	673	689	662	0													
Selection issues / Acquisition procedures	736	938	863	722	728	761	800	768	872	731	889	0												
Formats	845	817	740	703	601	824	661	689	779	704	630	783	0											
Security	806	888	757	748	604	869	652	742	850	833	767	704	357	0										
User training / orientation to use e-resources	930	1002	853	786	648	889	712	804	888	807	795	742	295	428	0									
Weeding policy	872	892	825	706	674	915	700	734	890	823	799	700	325	240	352	0								
Resource Sharing and Consortia	661	775	750	585	445	724	607	609	697	738	854	721	440	459	471	487	0							
Storage Problems	561	715	580	583	505	660	581	581	659	590	668	687	414	471	507	455	350	0						
Collection Development	808	724	739	632	520	687	626	666	652	679	665	796	519	646	574	630	595	575	0					
Stock Verification	738	892	819	754	562	723	752	678	740	797	1081	892	951	946	940	996	599	589	780	0				
Collection Evaluation	674	664	643	554	454	639	580	572	590	615	975	894	697	720	776	718	503	479	638	442	0			
User - Centered Challenges	898	1168	1109	1028	792	1037	992	922	1066	1007	1293	1204	1109	1136	1180	1204	781	793	830	660	712	0		
Digitization Issues	702	760	769	608	420	709	602	602	616	729	861	782	623	628	640	668	517	513	676	492	444	810	0	
	730	800	855	616	482	709	668	648	678	793	937	820	717	706	744	656	581	533	776	534	472	968	268	0

It can be seen from Table 5 that, the proximity value is between.381 and.839 which shows that there is a relation between the variables which were taken up for the study.

Reduction of Variables – Component Analysis

The rotated component analysis was carried out for the 24 variables and the same is show in table 6. Each component has been given name and the same is shown in table 6 and table 7.

Table 7: Rotated Component Matrix (a)

Variable Code	Description	Management	Policies	Procurement	Collection Development	User	Preservation	IT
3	Access (Licensing) of e-resources	.812						
1	Budget Issues / Financial Constraints	.772						
6	Technological obsolescence	.609						
2	Legal issues - Copyright / IPR	.608						
7	Human resources (IT Skilled Manpower)	.528						
14	Formats		.733					
17	Weeding policy		.511					
16	User training / orientation to use e-resources		.784					
13	Selection issues / Acquisition procedures		.605					
15	Security		.660					
10	Interoperability Issues			.559				
9	Arbitrary price structure / pricing models			.493				

8	Archiving of e-resources			.561				
4	Vendor support			.768				
5	Supply on demand			.673				
18	Resource Sharing and Consortia				.435			
21	Stock Verification				.532			
20	Collection Development Policy				.682			
22	Collection Evaluation				.825			
19	Storage Problems				.381			
24	Digitization Issues					.839		
23	User - Centered Challenges					.730		
11	Preservation						.726	
12	IT infrastructure to access e-resources						.	.800

Table 8: Components and Variables

Component Name	Variable Code	Description
Management	3	Access (Licensing) of e-resources
	1	Budget Issues / Financial Constraints
	6	Technological obsolescence
	2	Legal issues - Copyright / IPR
	7	Human resources (IT Skilled Manpower)
Policies	14	Formats
	17	Weeding policy
	16	User training / orientation to use e-resources
	13	Selection issues / Acquisition procedures
	15	Security
Procurement	10	Interoperability Issues
	9	Arbitrary price structure / pricing models
	8	Archiving of e-resources
	4	Vendor support
	5	Supply on demand
Collection Development	18	Resource Sharing and Consortia
	21	Stock Verification
	20	Collection Development Policy
	22	Collection Evaluation
	19	Storage Problems
User	24	Digitization Issues
	23	User - Centered Challenges
Preservation	11	Preservation
IT	12	IT infrastructure to access e-resources

Table 6 and 7 reveals the name of the 7 components and its related variables. The first component 'Management' has associated with 5 variables and the matrix value is between 0.528 and 0.812. Component 2 'Policies' is between 0.605 and 0.733, component 3 'Procurement' has the value between 0.493 and 0.768. Component 4 'Collection Development' has the value from 0.435 to 0.825, component 5 'User' is between 0.730 and 0.839. The components 6 'Preservation' and 6 'IT' have one variable each, and the matrix value is 0.725 and 0.800, respectively.

CONCLUSIONS

This study on the collection and development, explores how libraries are making difficult collection choices with decreasing funds, competing needs for space, and a continually developing e-market. Digital content is no longer new in collection management, but some of the ways the content is chosen have changed; collection-building activities now include various models of patron-driven demand acquisitions. Further, this study also examines how libraries are

addressing their print and electronic collections with topics, including open access materials, shared collection building, and weeding collections for repurposed space and the financial constraints.

The proliferating growth of various electronic resources in the present digital environment opens up new horizons across a broad array of issues related to the access, availability of information in different formats, collection policy agreements, licensing agreements, copyright issues, resource sharing, preservation and collection assessment. These challenges were grouped as Management, Policies, Procurement, Collection Development, User, Preservation and IT related challenges.

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